

REMARKS

The Office Action mailed March 24, 2008 has been carefully considered.

Reconsideration in view of the following remarks is respectfully requested.

Claim Status and Amendment to the Claims

Claims 1 and 58-129 are currently pending.

No claims stand allowed.

Claims 66, 78, 88, 96, 108, 118, 122, and 125 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. Support for these changes may be found in the specification, figures, and claims as originally filed.

Claims 2-57 were previously cancelled, without prejudice or disclaimer of the subject matter contained therein.

Objections to the Claims

Claims 66-80, 88-98, 108-120, and 122-126 stand objected to for various informalities.¹ With this Amendment, independent claims 66, 78, 88, 96, 108, 118, 122, and 125 have been amended accordingly. Withdrawal of the objection to the claims is respectfully requested.

The 35 U.S.C. § 102 Rejection

Claims 78-80, 96-98, 118-120, and 125-126 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Backes et al.² This rejection is respectfully traversed.

¹ Office Action mailed March 24, 2008, at ¶ 9.

² Office Action at ¶ 5.

According to the M.P.E.P., a claim is anticipated under 35 U.S.C. § 102(a), (b) and (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.³

Claim 78

Claim 78 as presently amended recites:

A method for discovering candidate network devices to be configured into a cluster of network devices and managed via a commander network device, the method comprising:
periodically transmitting discovery packets from the candidate network devices, the discovery packets including information indicating that the candidate network device is cluster-capable;
maintaining, at each of the candidate network devices, a neighbor device database containing information about other candidate network devices directly connected to the candidate network device; and
transmitting the information in the neighbor device database to the commander network device when the candidate network device is added to the cluster, all communication with network devices in the cluster being through a single network address assigned to the commander network device.

The Examiner states,

... Backes teaches: a method for discovering candidate network device to be configured into a cluster of network devices and managed via a commander network device (Fig 1 performs the method), said method comprising:
periodically transmitting discovery packets from the candidate network devices the discover packets including information indicating that the candidate device is capable of belonging to a cluster (the bridges or candidate devices periodically transmitting the BPDU or discover packets indicating configuration information associated with the bridge or capability to be a member of the spanning tree or cluster per col. 5 line 1 to col. 9 line 62) maintaining at each candidate network device a neighbor database containing information about other candidate network devices directly connected to the candidate network device (Each bridge keeps a forwarding table associated with the neighbor bridge per col. 5 line 1 to col. 9 line 62) transmitting the information in the neighbor device data base to the commander network device when the candidate network device is added to the cluster (message of information can be transmitted to the designated root or command by a bridge once it has been added to the spanning tree of cluster per col. 5 line 1 to col. 9 line 62) all communication with the network devices in the

³ Manual of Patent Examining Procedure (MPEP) § 2131. See also *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

cluster being through a single network address assigned to the commander network device (All communication from the bridges to the root bridge is sent to the root bridge which has a unique identifier per col. 5 lines 19 to line 50).⁴

The Applicant respectfully disagrees for the reasons set forth below.

Backes et al. Does Not Disclose All Communication With Network Devices In The Cluster Being Through A Single Network Address Assigned To The Commander Network Device

Contrary to the Examiner's statement, Backes et al. does not disclose all communication with network devices in the cluster being through a single network address assigned to the commander network device as required by Claim 78. In support of the Examiner's statement, the Examiner refers to a portion of Backes et al. that speaks generally about communication from bridges to a root bridge being sent to the root bridge, which has a unique identifier. However, each bridge of Backes et al. has its own network address which is unique with respect to a root bridge.⁵ Any communication between a particular bridge and its root bridge in Backes et al. is through the network address assigned to the particular bridge. In addition, any communication between a particular bridge and another network device *other* than the root bridge also uses the network address assigned to the particular bridge. Accordingly Backes et al. cannot be said to disclose *all* communication with network devices in the cluster being through a single network address assigned to the commander network device as required by Claim 78. For this reason, the 35 U.S.C. § 102 rejection of Claim 78 is unsupported by the cited art of record. Thus, a *prima facie* case has not been established and the rejection must be withdrawn.

Independent Claims 96 and 125

Claim 96 is a non-means-plus-function apparatus claim corresponding to method claim 78. Claim 125 is an *In re Beauregard* claim corresponding to method claim 78. Claim 78 being

⁴ Office Action dated March 24, 2008, p. 16.

⁵ See, e.g., Backes et al. at col. 5 ll. 19-25 and 35, col. 6 ll. 57-58, and reference numeral 440 of FIG. 4.

allowable, Claims 96 and 125 must also be allowable for at least the same reasons as for Claim 78.

Dependent Claims 79-80, 97-98, and 126

Claims 79-80 depend from Claim 78. Claims 97-98 depend from Claim 96. Claim 126 depends from Claim 125. Claims 78, 96, and 125 being allowable, Claims 79-80, 97-98, and 126 must also be allowable for at least the same reasons as for Claims 78, 96, and 125.

The First 35 U.S.C. § 103 Rejection

Claims 1, 58-73, 75-77, 81-95, 99-113, 115-117, 121-124 and 127-129 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Backes et al. in view of Perlman et al.,⁶ among which claims 1, 66, 81, 88, 99, 108, 121, and 122 are independent claims.⁷ This rejection is respectfully traversed.

According to the Manual of Patent Examining Procedure (M.P.E.P.),

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.⁸

Claim 1

Claim 1 recites:

A method for discovering and configuring network devices into a cluster, the method comprising:

⁶ U.S. Patent No. 5,574,860 to Perlman et al.

⁷ Office Action at ¶ 2.

⁸ M.P.E.P. § 2143.

automatically detecting candidate devices by receiving discovery packets from the candidate devices, the candidate devices periodically transmitting the discovery packets;
determining whether any of the candidate devices is qualified to join the cluster by applying qualification rules to the discovery packets received from the candidate devices; and
presenting to a user a list of the candidate network devices that are qualified to join the cluster.

The Examiner states,

... Backes teaches: A method for discovering and configuring network devices into a cluster said method (Fig 1 performs the method) comprising:
automatically detecting candidate devices by receiving discovery packets from the candidate devices, the candidate devices periodically transmitting the discovery packets (All bridges automatically receive and detect BPDU or discovery packets from all of the bridges in the network or candidates. The bridges inherently periodically transmit the BPDU or discovery packets periodically per col. 5 line 1 to col. 9 line 62)

determining whether any of the candidate devices is qualified to join the cluster by applying qualification rules to the discovery packet received from the candidate devices (BPDU are evaluated from the bridges or candidate devices in order to determine which bridges will be designated as daughter bridge and which bridge will be designated as a root or designated bridge. All bridges which do not have the lowest path cost are qualified to be daughter bridges per col. 5 line 1 to col. 9 line 62). Backes does not expressly call for: presenting to a user a list of the candidate network devices that are qualified to join the cluster

Perlman teaches: presenting to a user a list of the candidate network devices that are qualified to join the cluster (Designated node sends a complete list of all nodes in the network per col. 6 lines 22 to 48)

It would have been obvious to add presenting to a user a list of the candidate network devices that are qualified to join the cluster of Perlman to the system of Backes in order to insure all nodes are aware of the other nodes in the network.⁹

The Applicant respectfully disagrees for the reasons set forth below.

Backes et al. In View of Perlman et al. Does Not Disclose Presenting To A User A List Of The Candidate Network Devices That Are Qualified To Join The Cluster

Contrary to the Examiner's statement, Backes et al. in view of Perlman et al. does not disclose presenting to a user a list of the candidate network devices that are qualified to join the

⁹ Office Action, p. 2.

cluster. In support of the Examiner's statement, the Examiner refers to the following portion of Perlman et al.:

Once the designated node is known to all the other nodes, each node sends a Hello message periodically to the designated node, and the designated node periodically sends a DN Hello message to all of the nodes. Since the DN Hello message includes a complete list of nodes, all of the nodes are aware of the identities of the other nodes connected to the network.

Reconfiguration is a relatively simple matter. If a new node joins the network, it need only be manually configured to include at least one of the already operational nodes. For example, a new node N6 could be manually configured to be aware of N5. Node N6 would initially send a DN Hello message to N5; node N5 would send a Hello Redirect message back, indicating that N1 was a better qualified designated node; node N6 would send a Hello message to node N1; node N1 would add node N1 to its list and send N1 a DN Hello message; and then node N6 would change its current selection of designated node to node N1. In this way the technique of the invention quickly and automatically adjusts to configuration changes. Nodes dropping from the network are detected by the designated node when Hello messages are not received, and the designated node updates its list and sends copies to the other nodes with the DN Hello messages. If the designated node itself drops out of the network, each other node will again assume that it is the designated node, and there will be a further exchange of messages to determine a new designated node.¹⁰

The above portion of Perlman et al. cited by the Examiner speaks generally about one network node sending a message to all network nodes, where the message includes complete list of all nodes in a network. Perlman et al. says nothing about a cluster as required by Claim 1.

Furthermore, the list of Perlman et al. has nothing to do with *candidate* network devices that are *qualified* to join a cluster. Rather, the list of Perlman et al. is a complete list of all nodes in a network -- the nodes of Perlman et al. are not *candidates* with respect to the network (let alone a cluster), as their inclusion in the list of Perlman et al. means they are already members of the network. For this reason, the 35 U.S.C. § 103 Rejection of Claim 1 based on Backes et al. in view of Perlman et al. is unsupported by the cited art of record. Thus, a *prima facie* case has not been established and the rejection must be withdrawn.

¹⁰ Perlman et al. at col. 6 ll. 22-48.

Independent Claims 66, 81, 88, 121, and 122

Claim 81 is a non-means-plus-function apparatus claim corresponding to method claim 1. Claim 121 is an *In re Beauregard* claim corresponding to method claim 1. Independent claims 66, 88, and 122 include the limitation discussed above with respect to Claim 1. Claim 1 being allowable, Claims 66, 81, 88, 121, and 122 must also be allowable for at least the same reasons as for Claim 1.

Dependent Claims 58-65, 67-73, 75-77, 82-87, 89-95, 123-124 and 127-129

Claims 58-65 and 127 depend from Claim 1. Claims 67-73 and 75-77 depend from Claim 66. Claims 82-87 and 128 depend from Claim 81. Claims 89-95 depend from Claim 88. Claims 123-124 depend from Claim 122. Claims 1, 66, 81, 88, and 122 being allowable, Claims 58-65, 67-73, 75-77, 82-87, 89-95, 123-124 and 127-129 must also be allowable for at least the same reasons as for Claims 1, 66, 81, 88, and 122.

The Second 35 U.S.C. § 103 Rejection

Claims 74 and 114 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Backes et al. in view of Perlman et al., and further in view of Broka et al.,¹¹ among which no claims are independent claims.¹² This rejection is respectfully traversed.

Claims 74 and 114 depend from Claims 66 and 108, respectively. The arguments made with respect to the 35 U.S.C. § 103 rejection of independent Claims 66 and 108 apply here as well. The 35 U.S.C. § 103 rejection of Claims 66 and 108 is unsupported by the cited art of record because each and every element as set forth in Claims 66 and 108 is not taught or suggested by Backes et al. in view of Perlman et al. Accordingly, the 35 U.S.C. § 103 rejection

¹¹ U.S. Patent No. 5,809,483 to Broka.

of dependent claims 74 and 114 based on Backes et al. in view of Perlman et al. and further in view of Broka et al. is also unsupported by the cited art of record. Thus, a *prima facie* case has not been established and the rejection must be withdrawn.

Claims 99-120 and 129

Claims 99-120 and 129 are means-plus-function apparatus claims. In support of the rejections of Claims 99-120 and 129, the Examiner refers to substantially the same portions of the cited references used in the rejection of method claims 1, 58-80, and 127, non-means-plus-function apparatus claims 81-98 and 128, and *In re Beauregard* claims 121-126. The Examiner is referred to the U.S. Patent and Trademark Office document entitled "Examination Guidelines For Claims Reciting A "Means or Step Plus Function" Limitation In Accordance With 35 U.S.C § 112, 6th Paragraph" ("Guidelines"), a copy of which is submitted herewith for the Examiner's convenience. The Guidelines state:

... Per our holding, the 'broadest reasonable interpretation' that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, *the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a Patentability determination* ...

... [The] examiner shall interpret a § 112, 6th paragraph "means or step plus function" limitation in a claim as limited to the corresponding structure, materials or acts described in the specification and equivalents thereof in acts accordance with the following guidelines.¹³

The Guidelines state further:

... if a prior art reference teaches identity of function to that specified in a claim, then under Donaldson an examiner carries the initial burden of proof for showing that the prior art structure or step is the same as or equivalent to the structure, material, or acts described in the specification which has been identified as

¹² Office Action at ¶ 3.

¹³ "Examination Guidelines For Claims Reciting A "Means or Step Plus Function" Limitation In Accordance With 35 U.S.C § 112, 6th Paragraph," U.S. Patent and Trademark Office, <http://www.uspto.gov/web/offices/pac/dapp/pdf/exmgui.pdf>, p. 1. (emphasis added)

corresponding to the claimed means or step plus function.¹⁴

As Claims 99-120 and 129 of the present application are means-plus-function claims and Claims 1, 58-98, and 121-128 of the present application are non-means-plus-function claims, they cannot be said to be drawn to identical subject matter. Furthermore, the Examiner has not shown for each means-plus-function claim, that the prior art structure or step is the same as or equivalent to the structure, material, or acts described in the specification which has been identified as corresponding to the claimed means or step plus function. Therefore, the Examiner has not established a *prima facie* case and the 35 U.S.C. § 102 rejection of Claims 99-120 and 129 must be withdrawn.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Conclusion

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.


¹⁴ Guidelines at p. 3. (emphasis in original)

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Respectfully submitted,

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